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(Section Head)

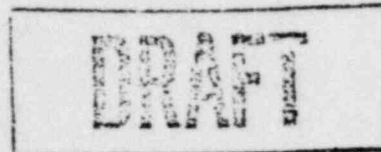
SP Number 29.023.05

Approved: _____
(Plant Manager)

Revision: C

Effective Date _____

RAPID RPV DEPRESSURIZATION
EMERGENCY PROCEDURE



1.0 PURPOSE

The purpose of this procedure is to rapidly depressurize the RPV to allow injection systems to inject and restore RPV water level to an acceptable level above TAF.

2.0 ENTRY CONDITIONS

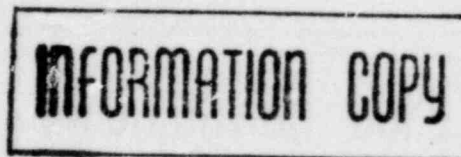
This procedure is entered from the following Emergency Procedures:

2.1 SP29.023.03 (Containment Control) when:

- 2.1.1 Suppression Pool temperature and RPV pressure cannot be maintained below the heat capacity temperature limit.
- 2.1.2 Drywell temperature near the cold reference leg instrument vertical runs has increased to the RPV saturation limit.
- 2.1.3 Drywell temperature cannot be maintained below 296°F.
- 2.1.4 Suppression Pool Water Level cannot be maintained above the heat capacity level limit.

2.2 SP29.023.04 (Level Restoration) when:

- 2.2.1 RPV water level cannot be determined and at least one normal injection or alternate injection subsystem is lined up with at least one pump running.
- 2.2.2 RPV water level is increasing, RPV pressure is between 100 psig and 333 psig and is increasing, HPCI and RCIC are not available.



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- 2.2.3 RPV water level is increasing, RPV pressure is less than 100 psig and RPV pressure is increasing.
- 2.2.4 RPV water level is decreasing, RPV pressure is greater than 333 psig, CRD is not operating and at least two injection subsystems are lined up for injection with pumps running.
- 2.2.5 RPV water level is decreasing, RPV pressure is less than 333 psig, any injection or alternate injection subsystem is lined up with pumps running and RPV pressure is increasing.
- 2.2.6 RPV water level is decreasing, RPV pressure is greater than 333 psig and low pressure injection subsystems or Alternate Injection Subsystems are lined up for injection with at least one pump running.

3.0 OPERATOR ACTION

- 3.1 Open all ADS valves by manually opening each of the individual valves.

CAUTION

Do not depressurize the RPV below 100 psig (HPCI low pressure isolation setpoint) unless motor driven pumps sufficient to maintain RPV water level are running and available for injection.

CAUTION

Observe NPSH requirements for pumps taking a suction from the Suppression Pool.

| Suppression Pool | | |
|------------------|---------------------|---------------|
| Pumps | Maximum Temperature | Minimum Level |
| HPCI | (Later) | (Later) |
| CS | (Later) | (Later) |
| RHR | (Later) | (Later) |
| RCIC | (Later) | (Later) |

CAUTION

Cooldown rates greater than 100°F/hr may be required to accomplish this step.

- 3.2 If not all ADS valves can be opened, open other SRV's until 7 valves are open.
- 3.3 If less than (later) SRV's can be opened, rapidly depressurize the RPV using one or more of the following systems:

CAUTION

Defeating isolation interlocks may be required to complete this step. Use in the order which will minimize radioactive release to the environment.

(A) Main Condenser Available

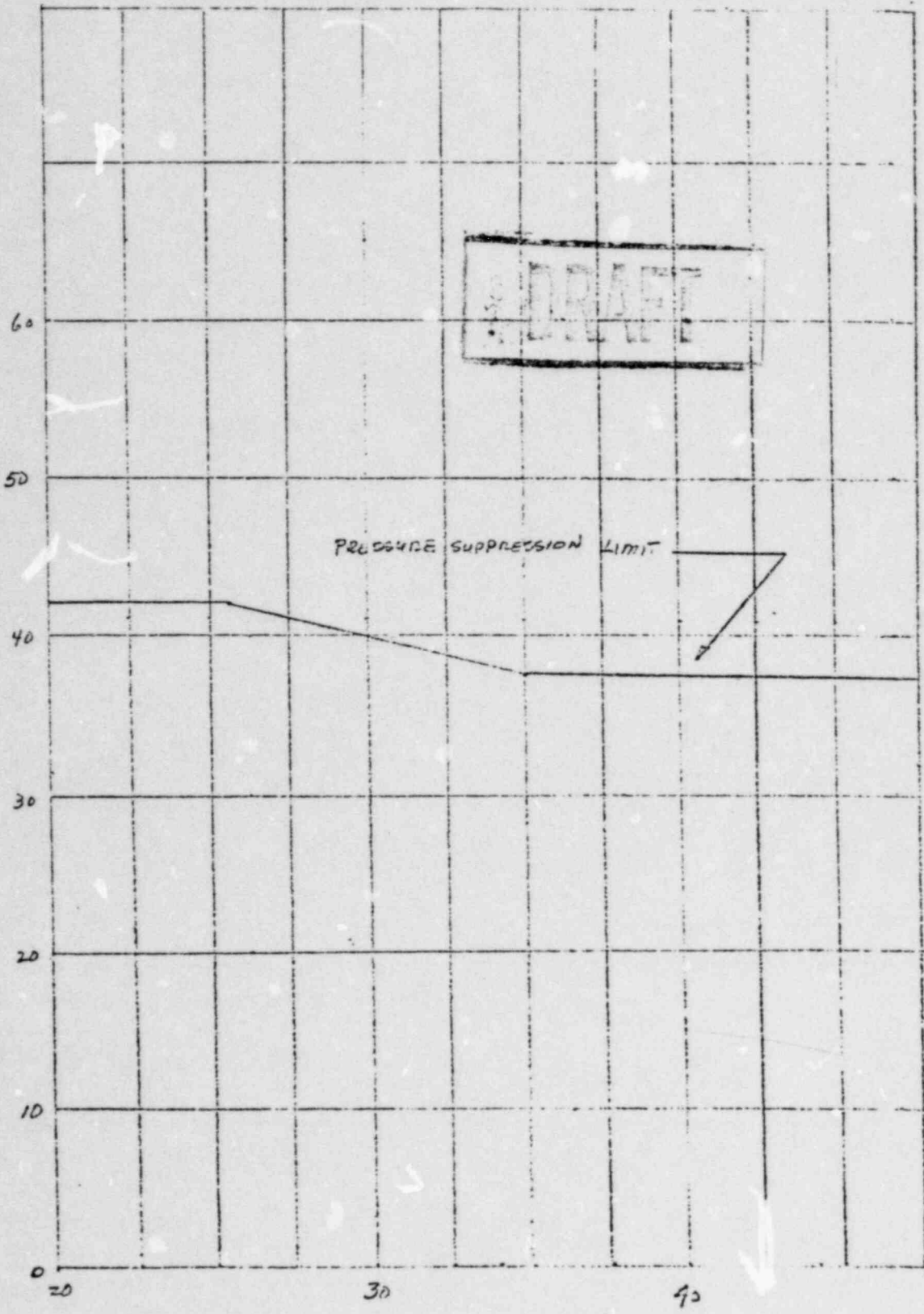
- (1) Main Turbine Bypass Valves (Preferred Method) per SP 22.005.01, Shutdown to Cold Shutdown.
- (2) RCIC per SP 23.119.01, Reactor Core Isolation Cooling (RCIC) System.
- (3) HPCI per SP 23.202.01, High Pressure Coolant Injection.
- (4) RHR (Steam Condensing Mode) per SP 23.121.01, Residual Heat Removal (RHR) System.
- (5) Other Steam Driven Equipment
 - (1) Steam Jet Air Ejectors per SP 23.701.01, Condenser Off-Gas Removal.
 - (2) RFPTS per SP 23.109.01, Feedwater System
 - (3) Steam Seal Evaporator per SP 23.124.01, Steam Sealing
 - (4) Main Condenser Deaerating Steam per SP 23.103.01, Condensate
 - (5) RPV Head Vent
 - (6) Main Steam Line Drains per SP 23.116.01, Main and Auxiliary Steam
 - (7) RWCU (Blowdown Mode) per SP 23.701.01, Reactor Water Cleanup System

- 3.4 If suppression chamber pressure cannot be maintained below the pressure suppression limit, (Fig. 1), proceed to SP29.023.09 (RPV Flooding). _____
- 3.5 If RPV water level cannot be determined, enter SP29.023.09 (RPV Flooding). _____
- 3.6 If temperature near the cold reference leg instrument, vertical runs reaches the RPV saturation limit as determined from Figure 2, proceed to SP29.023.09 (RPV Flooding). _____
- 3.7 Proceed to SP29.023.01 (Level Control) Step 3.3 _____

4.0 REFERENCES

- 4.1 SP 29.023.03 Containment Control
- 4.2 SP 29.023.04 Level Restoration
- 4.3 SP 29.023.09 RPV Flooding
- 4.4 SP 22.005.01 Shutdown to Cold Shutdown
- 4.5 SP 23.119.01 Reactor Core Isolation Cooling (RCIC) System
- 4.6 SP 23.202.01 High Pressure Coolant Injection
- 4.7 SP 23.121.01 Residual Heat Removal (RHR) System
- 4.8 SP 23.701.01 Condenser Off Gas Removal
- 4.9 SP 23.124.01 Steam Sealing
- 4.10 SP 23.103.01 Condensate
- 4.11 SP 23.109.01 Feedwater System
- 4.12 SP 23.709.01 Reactor Water Cleanup System

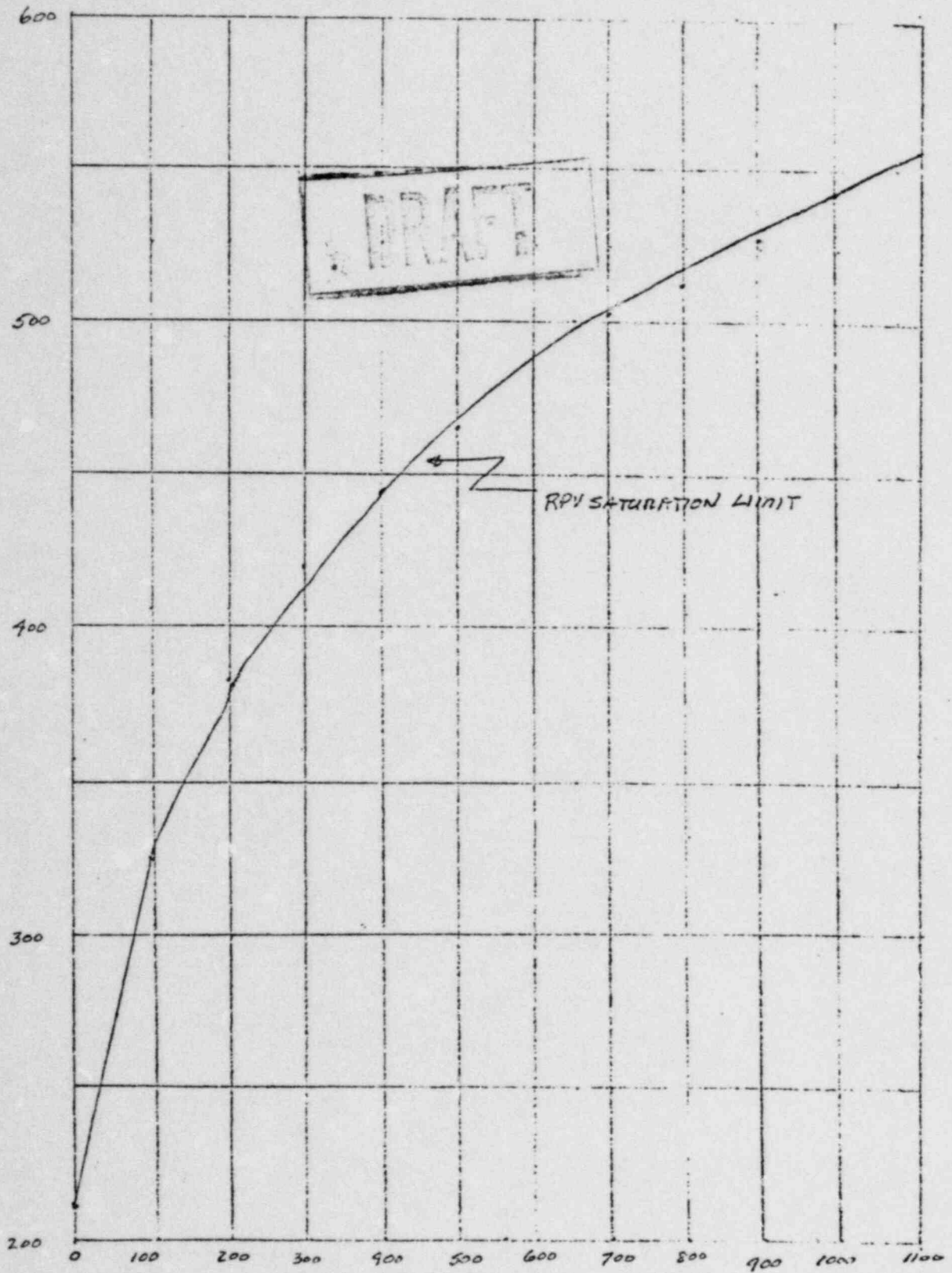
SUPPRESSION CHAMBER PRESSURE (PSIG)



SUPPRESSION POOL WATER LEVEL (FT)

FIG 1

TEMPERATURE (°F)
(NEAR COLD REFERENCE LEGS - INSTANTANEOUS VERTICAL RUNS)



RPI PRESSURE (PSIG)

FIG 2

SP29.023.05
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Rev. C
Page 6